ABSTRACT OF THE DISCLOSURE

A rolling friction transmission apparatus of a wedge roller type is provided with: a rolling-surface-shaft; a ring; and three transmission rollers in an unequally-spaced space generated between the rolling-surface-shaft and the ring. The two of the three transmission rollers are fixed, and the rest is used as a wedge roller supported with its axis rotatable. The wedge roller is placed at a spatial position where the unequally-spaced space is wider than in the middle of the spatial position where the unequally-spaced space is at the widest and the spatial position where the unequally-spaced space is the narrowest. Friction forces generated by torque on the contact surfaces among the rolling-surface-shaft, the ring, and the transmission rollers cause large normal forces on the contact surfaces.